Discovering Journal Metrics

February 2019
Workshop Outline

Investigation
Implications of journal metrics to academic publications

Databases Introduction
InCites Journal Citation Reports (JCR)
Scopus - Sources
Access Points of Databases

- Research Evaluation Metrics
- Database A-Z
- iSearch
How Journal Metrics Impact to Academic Publication
Basic Concept of Research Metrics

- Journal-Level Metrics
- Article-Level Metrics
- Author-Level Metrics
Journal-Level Metrics

• Measure the impact of a journal title
• Most of the journal level indicators take the citation metrics into account
• Example of journal-level indicator:
  • Impact Factor (JCR)

Focus of This Workshop
Article-Level Metrics

- **Not equal** to Citation metrics
- Contain wider scope of measurement that are not limited to citation

Quantify impact of articles that have been:
- cited
- marked
- Mentioned
- discussed
- shared

Examined data includes:
- mentioned in research blogs
- shares in social networks platforms
- online bookmaking
- social ratings
- discussions, etc.

Examples:
- PlumX Metrics, plugged in:
  - EduHK Lib iSearch,
  - EdUHK Research Repository,
  - Scopus,
  - ScienceDirect, etc.
- Altmetric
  - partnering with SpringerLink
Author-Level Metrics

- Measure the impact of an author made on scholarly community
- Recent popular metrics are citation focused
- New trend of author-level metrics consider usage and connectivity
- Make academic outputs of individual author more visible
- Thus, a number of academic profile platforms emerged

- Example of author-level metrics
  - h-index → a traditional index focus on citation

- Examples of academic profile platforms
  - Google Scholar Citations
  - ResearchGate
Major Journal Ranking Indicators

- Impact Factor
  - calculate indexed journals in JCR
- Eigenfactor® Score
  - calculate indexed journals from JCR
- CiteScore
  - calculated indexed journals in Scopus
- SCImago Journal Rank (SJR)
  - [https://www.scimagojr.com/](https://www.scimagojr.com/)
  - calculated indexed journals in Scopus
  - also published in Scopus
- Source Normalized Impact per Paper (SNIP)
  - Centre for Science and Technology Studies (CWTS) of Leiden University
  - also published in Scopus
- **EdUHK Journal Ranking Lists**
  - MS-Based English Journal Ranking List
  - MS-Based Chinese Journal Ranking List
Journal Metrics Tell Academia About

- Idea about publication channels
- Level of journals
- Popularity of journals
- Prestige of journals
- Directions of which journal title is appropriate to their manuscript
- Angle how academic institutions view researchers’ achievements
  - Impact to academic tenure and promotions
- Directions of journal subscriptions and related library funding allocations

(Perera & Wijewickrema, 2018)

Discussion:
How the journal metrics impacts to academic publication ecology?
InCites Journal Citation Reports (JCR)
## Overview to InCites JCR

| Numbers | • 12,000 journals (scholarly and technical journals) + conference proceedings  
|         | • 3,300 publishers  
|         | • 60 countries / territories |

| Disciplines | • Editions [Indices]: Science Edition [Science Citation Index Expanded (SCIE)] & Social Sciences Edition [Social Science Citation Index (SSCI)]  
|             | • Science  
|             | • Technology  
|             | • Social Sciences |

| Features | • Review journal titles and key performance in the category  
|          | • Compare multiple journals based on a chosen indicator  
|          | • Evaluate performance of journals  
|          | • Recognise trending journals in key research categories  
|          | • Identify the ideal journal in which to publish your forthcoming research |
Key Indicators in JCR: Evaluating Journals

- **Journal Impact Factor**: On average, frequency of articles cited from a journal in a JCR year – based on number of articles published of such journal in the **TWO** previous years.

- **Journal Impact Factor without Self Cites**: On average, frequency of articles cited from a journal in a JCR year in which times of citations from same journal is omitted – based on number of articles published of such journal in the **TWO** previous years.

- **5-Year Impact Factor**: On average, frequency of articles cited from a journal in a JCR year – based on number of articles published in the **FIVE** previous years.

- **Immediacy Index**: On average, how many times an article in a particular journal is being cited in the same year – based on number of articles in the year.
Key Indicators in JCR: Evaluating Journals

- **Cited Half-Life**
  - **Median age** of the citations received by a journal during a JCR year
  - Indicates how far back the older articles in this journal are still being cited

- **Citing Half-Life**
  - **Median age** of citations produced by a journal during a JCR year
  - Indicates how recent or how old the bibliography referred by articles in this journal are

- **Eigenfactor®**
  - Enhanced 5-year impact factor – by giving higher score for getting cited in more influential journals and eliminates self-citation

- **Article Influence®**
  - Derived from the Eigenfactor® based on matching the use of the journal’s influence against the use of the all journal’s articles from JCR database
  - Natural influence is 1.00 – thus a journal with article influence score greater than 1.00 indicates that each article in the journal has above-average influence and vice versa
Key Indicators in JCR: Evaluating Subject Categories

Median Impact Factor

- The impact factor of the middle journal within a particular subject category in the calculated previous 2 years for a JCR year

Aggregate Impact Factor

- Takes into account the number of citations to all journals in a category and the number of articles from all journal in a subject category in the previous 2 years
- e.g. if an Aggregate Impact Factor is 1.0 means, on average, the articles in a subject category published in two year period of time have been cited once

Aggregate Immediacy Index

- Takes into account the citations made for a subject category in the current year and the number of articles from all journal in the same year
Key Indicators in JCR: Evaluating **Subject Categories**

**Aggregate Cited Half-Life**
- Median age of the articles were cited by the journals of a particular subject category in a JCR year

**Aggregate Citing Half-Life**
- Median age of the citations produced by a subject category in a JCR year
More about Journal Impact Factor

- A statistic intended to reflect the “impact” of a journal

- Indicates the average frequency of articles published in a particular journal were being cited during the past two years

- Provides a functional approximation of the mean citation rate per citable item

The Calculation

Citations in the JCR year to items published in previous TWO years

Number of citable items in the previous TWO years
Journal Impact Factor Quartile (JIF Quartile) - Key Additional Indicator

- Gives idea of the quality profile of the journals in a specific category

- Calculation:
  - $X =$ the journal rank in category according to the metric
  - $Y =$ the number of journals in the category
  - $Z =$ Percentile rank ($X/Y$)

- $Q1$  $(0.0 < Z \leq 0.25)$ = Top Positioning Journals
- $Q2$  $(0.25 < Z \leq 0.5)$ = Mid-Upper Positioning Journals
- $Q3$  $(0.5 < Z \leq 0.75)$ = Mid-Lower Positioning Journals
- $Q4$  $(0.75 < Z)$ = Bottom Positioning Journals
More about Eigenfactor® Score

A research project leaded by West Lab and Bergstrom Lab at University of Washington

Article Influence® is emerged under the same project

Measurement method includes:

• citation network of journals
• number of times articles from a journal cited in past five years
• highly cited journals will influence more the network more than less cited journals
• lower-tier journals will influence less to the score
• citations of an article from same journal are removed
• not influence by journal self-citation
Practice

- Journal Reports
  - operation and understanding of journal reports
  - comparing journals

- Category Reports
  - operation and understanding of category reports

- Generating Reports
Find a Journal

Login is required if saving your preference
The data in the two graphs below and in the Journal Impact Factor calculation panels represent citation activity in 2017 to items published in the journal in the prior two years. They detail the components of the Journal Impact Factor. Use the "All Years" tab to access key metrics and additional data for the current year and all prior years for this journal.
### Journal Report - All Year

#### Key Indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Cites</th>
<th>Journal Impact Factor</th>
<th>Impact Factor Without Journal Self Citations</th>
<th>5 Year Impact Factor</th>
<th>Influence Index</th>
<th>Citations</th>
<th>Cited Half-Life</th>
<th>Citing Half-Life</th>
<th>Eigenfactor Score</th>
<th>Article Influence Score</th>
<th>% Articles in Top 10%</th>
<th>Normalized Eigenfactor Score</th>
<th>Average JIF Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1,218</td>
<td>4.973</td>
<td>4.810</td>
<td>7.053</td>
<td>0.929</td>
<td>28</td>
<td>5.1</td>
<td>8.3</td>
<td>0.00</td>
<td>2.007</td>
<td>0.00</td>
<td>0.30</td>
<td>98.950</td>
</tr>
<tr>
<td>2016</td>
<td>833</td>
<td>3.839</td>
<td>3.709</td>
<td>5.655</td>
<td>0.667</td>
<td>21</td>
<td>5.3</td>
<td>8.2</td>
<td>0.00</td>
<td>1.915</td>
<td>14.29</td>
<td>0.27</td>
<td>98.085</td>
</tr>
<tr>
<td>2015</td>
<td>652</td>
<td>3.860</td>
<td>3.813</td>
<td>5.140</td>
<td>0.125</td>
<td>16</td>
<td>4.5</td>
<td>8.4</td>
<td>0.00</td>
<td>1.923</td>
<td>6.25</td>
<td>0.28</td>
<td>98.918</td>
</tr>
<tr>
<td>2014</td>
<td>369</td>
<td>2.462</td>
<td>2.460</td>
<td>3.700</td>
<td>0.400</td>
<td>15</td>
<td>3.9</td>
<td>&gt;10.0</td>
<td>0.00</td>
<td>1.541</td>
<td>6.67</td>
<td>0.19</td>
<td>95.313</td>
</tr>
<tr>
<td>2013</td>
<td>329</td>
<td>2.107</td>
<td>2.174</td>
<td>1.069</td>
<td>1.086</td>
<td>28</td>
<td>3.4</td>
<td>9.8</td>
<td>0.00</td>
<td>1.374</td>
<td>7.14</td>
<td>0.16</td>
<td>96.402</td>
</tr>
<tr>
<td>2012</td>
<td>148</td>
<td>2.593</td>
<td>2.448</td>
<td>Not...</td>
<td>0.163</td>
<td>14</td>
<td>2.9</td>
<td>9.9</td>
<td>0.00</td>
<td>Not...</td>
<td>7.14</td>
<td>0.16</td>
<td>96.575</td>
</tr>
<tr>
<td>2011</td>
<td>115</td>
<td>2.333</td>
<td>2.060</td>
<td>Not...</td>
<td>0.295</td>
<td>14</td>
<td>2.4</td>
<td>8.3</td>
<td>0.00</td>
<td>Not...</td>
<td>14.29</td>
<td>0.19</td>
<td>95.874</td>
</tr>
<tr>
<td>2010</td>
<td>33</td>
<td>1.261</td>
<td>1.261</td>
<td>Not...</td>
<td>0.267</td>
<td>15</td>
<td>Not</td>
<td>9.9</td>
<td>0.00</td>
<td>Not...</td>
<td>53.33</td>
<td>0.19</td>
<td>77.989</td>
</tr>
</tbody>
</table>

#### Source Data

### Rank

### Cited Journal Data

### Citing Journal Data

### Box Plot

### Journal Relationships

### Metric Trend
Journal Report - All Year

• A journal can belong to more than one subject category
• Thus, a journal fall into more than one subject category rankings
Comparing Journals

1. Select Comparison
   - Quarterly
   - Trends

2. Select JCR Year
   - 2017

3. Select Categories
   - Q1
   - Q2
   - Q3
   - Q4

4. Select Metrics
   - Impact Factor
   - Influence Score

5. Select JCR Years
   - 2010
   - 2011
   - 2012
   - 2013
   - 2014
   - 2015
   - 2016
   - 2017

6. Select Metric
   - Impact Factor Without JCR

Journal Titles Ranked by Impact Factor

Compare Selected Journals

Add Journals to New or Existing List

Customize Indicators

View Title Changes

Select Journals

Search Journal

Select Categories

Compare Journals

Go to Journal Profile

Categories By Rank

Journals By Rank

AMERICAN SOCIOLOGICAL REVIEW
AMERICAN JOURNAL OF SOCIOLOGY
ANNUALS OF TOURISM RESEARCH
JOURNAL OF MARRIAGE AND FAMILY
JOURNAL OF MARRIAGE AND FAMILY
SOCIAL NETWORKS
JOURNAL OF HEALTH AND SOCIAL BEHAVIOR
SOCIAL FORCES
SOCIAL INDICATORS RESEARCH
SOCIAL NETWORKS

Journal Titles Ranked by Impact Factor

1. AMERICAN SOCIOLOGICAL REVIEW
   - 19.277
   - 5.963
2. AMERICAN JOURNAL OF SOCIOLOGY
   - 18.425
   - 3.764
3. ANNUALS OF TOURISM RESEARCH
   - 11.723
   - 2.846
4. JOURNAL OF MARRIAGE AND FAMILY
   - 10.926
   - 2.602
5. JOURNAL OF MARRIAGE AND FAMILY
   - 8.645
   - 1.773
6. JOURNAL OF HEALTH AND SOCIAL BEHAVIOR
   - 7.982
   - 2.517
7. SOCIAL FORCES
   - 7.624
   - 2.156
8. SOCIAL INDICATORS RESEARCH
   - 7.146
   - 1.648
9. SOCIAL NETWORKS
   - 5.023
   - 2.130

Journal Titles Ranked by Impact Factor

1. AMERICAN SOCIOLOGICAL REVIEW
   - Q1
   - Q1
   - Q1
   - Q1
2. ANNUALS OF TOURISM RESEARCH
   - Q1
   - Q1
   - Q1
   - Q1
3. JOURNAL OF MARRIAGE AND FAMILY
   - Q1
   - Q1
   - Q1
   - Q1
4. JOURNAL OF MARRIAGE AND FAMILY
   - Q1
   - Q1
   - Q1
   - Q1
5. JOURNAL OF HEALTH AND SOCIAL BEHAVIOR
   - Q1
   - Q1
   - Q1
   - Q1
6. SOCIAL FORCES
   - Q1
   - Q1
   - Q1
   - Q1
7. SOCIAL INDICATORS RESEARCH
   - Q1
   - Q1
   - Q1
   - Q1
8. SOCIAL NETWORKS
   - Q1
   - Q1
   - Q1
   - Q1

Impact Factor, Influence Score

Year

AMERICAN SOCIOLOGICAL REVIEW
AMERICAN JOURNAL OF SOCIOLOGY
ANNUALS OF TOURISM RESEARCH
JOURNAL OF MARRIAGE AND FAMILY
JOURNAL OF MARRIAGE AND FAMILY
SOCIAL NETWORKS
JOURNAL OF HEALTH AND SOCIAL BEHAVIOR
SOCIAL FORCES
SOCIAL INDICATORS RESEARCH
SOCIAL NETWORKS

Clear
Submit
Save
Finding Categories
Category Report
Generating Reports

- Journal Rankings AND Subject Category Rankings
  - Selecting your evaluated journals or subject categories
  - Selecting your preferred indicators
  - CSV or XLS format

- Journal Comparison
  - Under the environment of “Compare Journals”
  - PDF format only
Let’s Try InCites JCR

• Exercises
  • What is the Journal Impact Factor for the journal entitled *Early Childhood Research Quarterly* in 2013 and 2017?
  
  • What subject categories does *Early Childhood Research Quarterly* fall into? AND What are the respective subject rankings of this journal in its subject categories in 2017?
  
  • What is the full name and JCR abbreviation of the highest ranked journal under the subject category “Green & Sustainable Science & Technology” in JCR 2016 social science edition.
Know More About InCite JCR

- InCites JCR Help

- InCites JCR Learning Materials
  [http://clarivate.libguides.com/jcr](http://clarivate.libguides.com/jcr)

- Blog Posts from Clarivate Analytics about InCites JCR
  [https://clarivate.com/blog/tag/journal-citation-reports/](https://clarivate.com/blog/tag/journal-citation-reports/)

- Journal Selection Porcess – SCIE, SSCI, and AHCI
  [https://clarivate.com/essays/journal-selection-process/](https://clarivate.com/essays/journal-selection-process/)
Scopus - Sources Section
Overview

- Largest abstract and citation database of peer-reviewed literature
- Coverage:
  - Data from over 5,000 publishers
  - Types: journals, books, conference proceedings, patents.
  - Over 69 million records
    - 62.4+ million records post 1969 with references
    - 6.6+ million records pre-1970, with the oldest record dating back to 1788
  - Over 39 million patent records
  - Over 12 million author profiles
  - Over 70,000 main institutional profiles

Covered Journal Metrics

- CiteScore
- SCImago Journal Rank (SJR)
- Source Normalized Impact per Paper (SNIP)
CiteScore Indicators

- **CiteScore**
  - Average number of citations received in a calendar year by all items published in that journal in the preceding three years
  - Include all available document types in Scopus
  - Calculate once a year
  - Calculation: \( \frac{\text{Citation Count in a year}}{\text{Documents in preceding three years}} \)

- **CiteScore Tracker**
  - Same calculation as CiteScore
  - But for the current year rather than previous, complete years
  - Not based on a rolling 12 month window
  - Update every month
CiteScore Indicators

- **CiteScore Percentile**
  - Indicates the relative standing of a journal in its subject field
  - A CiteScore percentile of 98% means the journal is in the top 2% of its subject field
  - Use this number to compare journals in different subject fields

- **CiteScore Quartiles**
  - Bands of serial titles that have been grouped together because they occupy a similar position within their subject categories. The quartiles are:
    - Quartile 1: serial titles in 99-75th percentiles
    - Quartile 2: serial titles in 74-50th percentiles
    - Quartile 3: serial titles in 49-25th percentiles
    - Quartile 4: serial titles in 24-0th percentiles

- **CiteScore Rank and Rank Out Of**
  - Indicates the absolute standing of a serial in its field
**SJR & SNIP**

### SJR
- Reflect prestige weight of a journal
- Concerns both number of citation and source of citations
- Subject field, quality, and reputation of a journal will affect the value of citations directly

### SNIP
- Measure actual citations received relative to citations expected for the serial’s subject field
- Concerns the number of citations per paper, the amount of indexed literature, and the speed of the publication process
- Helps in comparing the sources in across subject fields
CiteSore Metrics for Serials

Access to "Sources" section for Journal Metrics exploration

Search scope can be chosen

Enter title: education research review

39,647 results

Search options:
- Subject area
- Title
- Publisher
- ISSN

Display options:
- Display only Open Access
- Display only source: minimum
- Show only titles in top 10 percent
- 1st quartile
- 2nd quartile
- 3rd quartile

CitreScore: 130.47
Highest percent tile: 99%
Documents 2017: 16,901
Documents 2014-16: 130
% Cited: 70
SNIP: 88.164

1. A Cancer Journal for Clinicians
2. MMWR. Recommendations and reports: Morbidity and mortality weekly report. Recommendations and reports / Centers for Disease Control. Open Access
3. Chemical Reviews
### Results List

#### Filter refine list
- Display only Open Access journals
- Display only source with minimum 0 Documents
- Citerscore highest quartile
- Show only titles in top 10 percent
- 1st quartile
- 2nd quartile
- 3rd quartile
- 4th quartile
- Source type:
  - Journals
  - Book Series
  - Conference Proceedings
  - Trade Publications

#### Display options

<table>
<thead>
<tr>
<th>Source title</th>
<th>CitScore</th>
<th>Highest percentile</th>
<th>Citations 2017</th>
<th>Documents 2014-16</th>
<th>% Cited</th>
<th>SNIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMWR, Recommendations and reports / Morbidity and mortality weekly report. Recommendations and reports / Centers for Disease Control Open Access</td>
<td>63.12</td>
<td>99% 1/87 Epidemiology</td>
<td>1,010</td>
<td>16</td>
<td>100</td>
<td>32.534</td>
</tr>
<tr>
<td>MMWR, Surveillance summaries / Morbidity and mortality weekly report. Surveillance summaries / CDC Open Access</td>
<td>20.64</td>
<td>99% 2/241 Health (social science)</td>
<td>1,548</td>
<td>75</td>
<td>88</td>
<td>19.655</td>
</tr>
<tr>
<td>Personality and Social Psychology Review</td>
<td>10.75</td>
<td>99% 1/247 Social Psychology</td>
<td>670</td>
<td>53</td>
<td>98</td>
<td>5.519</td>
</tr>
<tr>
<td>Nature Climate Change</td>
<td>10.71</td>
<td>99% 1/63 Environmental Science (miscellaneous)</td>
<td>9,876</td>
<td>922</td>
<td>76</td>
<td>5.047</td>
</tr>
<tr>
<td>Advances in Experimental Social Psychology</td>
<td>8.13</td>
<td>99% 2/247 Social Psychology</td>
<td>244</td>
<td>30</td>
<td>93</td>
<td>6.375</td>
</tr>
<tr>
<td>Morbidity and Mortality Weekly Report Open Access</td>
<td>7.78</td>
<td>98% 3/241 Health (social science)</td>
<td>8,033</td>
<td>1,032</td>
<td>72</td>
<td>4.251</td>
</tr>
</tbody>
</table>

- View metrics for year: 2017
Let’s Try Scopus - Sources Section

• Exercises

• *Which title* has the highest SNIP score across the subject areas of “Public Administration” and “Sociology And Political Science” in 2017?

AND

• What kind of *document type* of this title is?

• *Which title* has the highest SJR score in the 2\(^{nd}\) quartile under subject area of “Social Sciences: Education” in 2017?

AND

• What is the rank of this title under the quartile under subject area of “Social Sciences: Education” in 2017?
Thank you so much for joining!

